PLCS Meeting

Washington

15th – 16th February 2006

Agenda

- What is interoperability
- What are the drivers for change?
- What does a project need to consider?
- What does PLCS Offer?
- How is the UK adopting PLCS?
- Summary

Introduction

- Dennis Hoyland
- Head of ILS and Engineering policy part of Technical Enabling Services MOD UK
- Responsible for ILS Policy and Advice and Guidance to Integrated Project Teams on its application

Drivers for Change

- The Support environment needs to be flexible to react to the operational situation.
- The same activities and supporting data are required.
- It is who carries out the activities, holds the data and how it is delivered that changes.
- This means that a clear understanding of activities, deliverables and data exchanges is essential.

Interoperability

- Changing Scope of Operations:
  - Modern military campaigns are based on cooperation between collaborating nations.
  - Increasing collaboration on logistical issues.
  - Increased requirement for equipment flexibility and interoperability with coalition partners is crucial.
  - Divergent equipment designs and support solutions are impacting that imperative.
  - Coalition nations therefore must cooperate to employ the same or compatible methodologies and solutions to eliminate such problems.
- What we mean is interoperability.

Interoperability

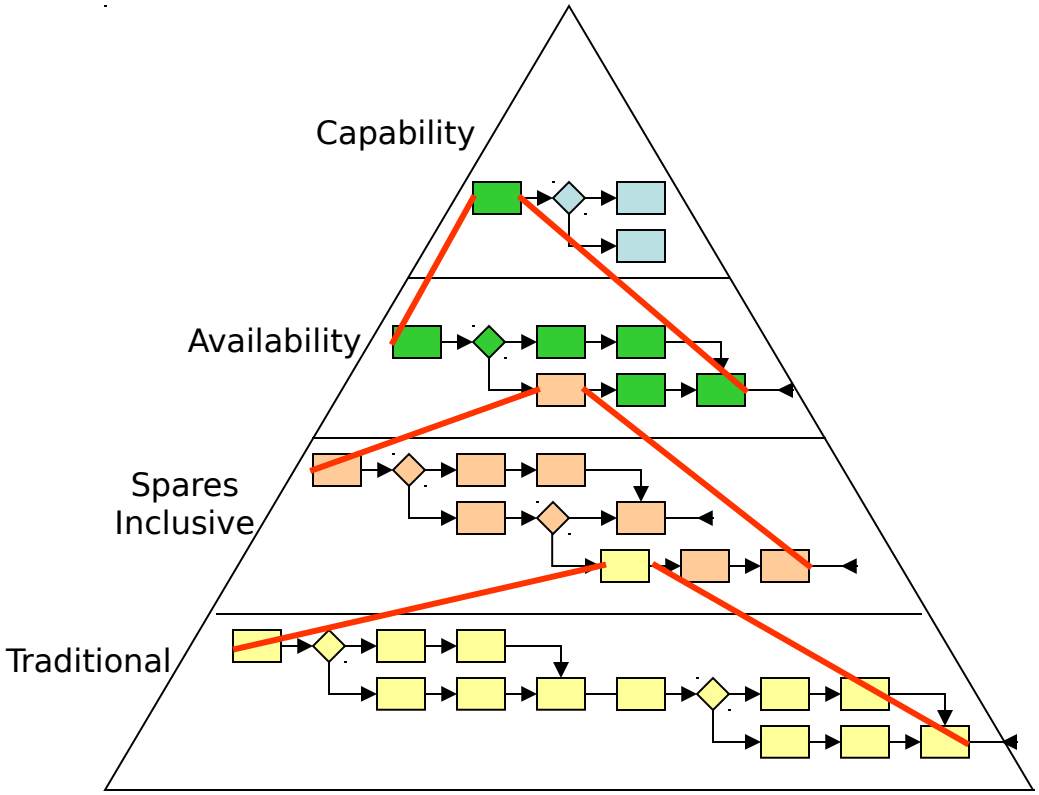
- It could mean:
  - To use, with ease, others equipment
  - The ability to communicate across information systems,
  - To access information produced elsewhere, but required for operations without loss of meaning or intent
  - To maintain equipment at sites not equipped by us
  - To train using shared information
- How do we ensure interoperability?
  - Data Definitions need to be consistent across platforms be they Sea, Land or Air.
  - Interfaces need to be defined.
  - They will vary and any solution needs to take care of the inevitable variations.
  - This flexibility based on a standards approach will ensure interoperability.

What Does a Project Need to Consider

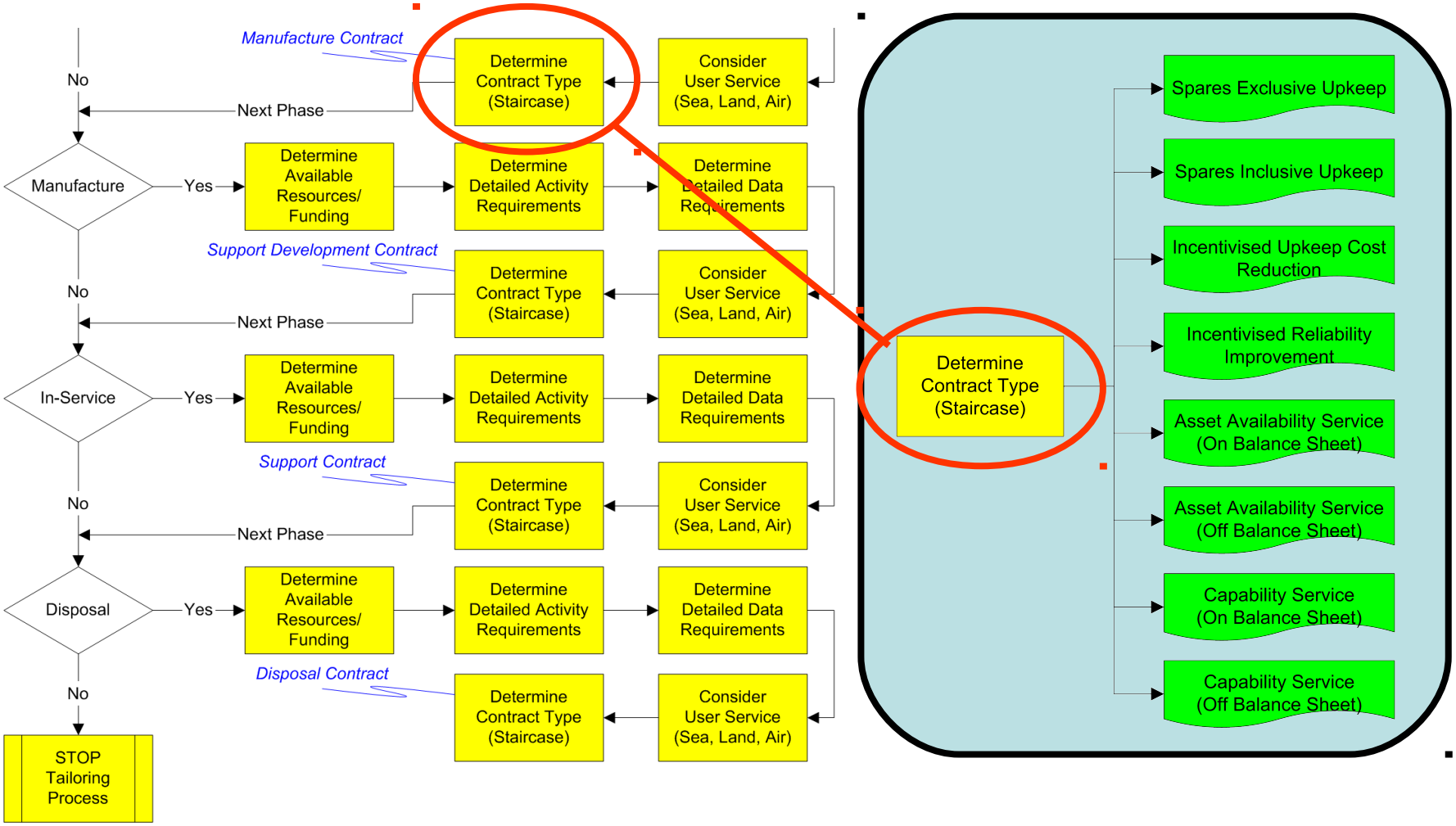
- What activities should be undertaken in-house and within industry and hence the contracting solution.
- The activities industry is equipped to carry out and that will be accepted by industry e.g. sufficient return on capital.
- The customer and industry processes required and what data supports them.
- Where the data is to be held, what data needs to be exchanged and how it will be exchanged.
- Last but not least how the project will assure that the project is on target to deliver a robust support solution.

Activities Related Type of Contract

- The totality of activities does not change
- The customer only specifies in-house processes.
- An understanding of the activity and process is required to define the data exchange requirements.
- At each level there is a need to specify:
  - Contract requirements
  - How contract compliance will be measured
  - What evidence is required to demonstrate the level of analysis undertaken
  - What information is required to allow for the contract to be re-competed at a future date



Tailoring Methodology



How are we Taking This Forward?

- We now have Support Options Matrix (SOM) to determine those activities that may be completed by industry. This is a further breaks down of the original staircase (Capability, Availability, Spares Inclusive and Traditional).
- The options will be based on Business outputs so that there is a clear rationale underpinning each support chain solution to define:
  - The cost and performance drivers that will be managed by industry
  - The desired outcomes in terms of support cost and performance
  - The means of measuring progress towards desired outcomes.
- There can be those that are the total responsibility of industry, MOD and those that are shared.

How Does PLCS Help?

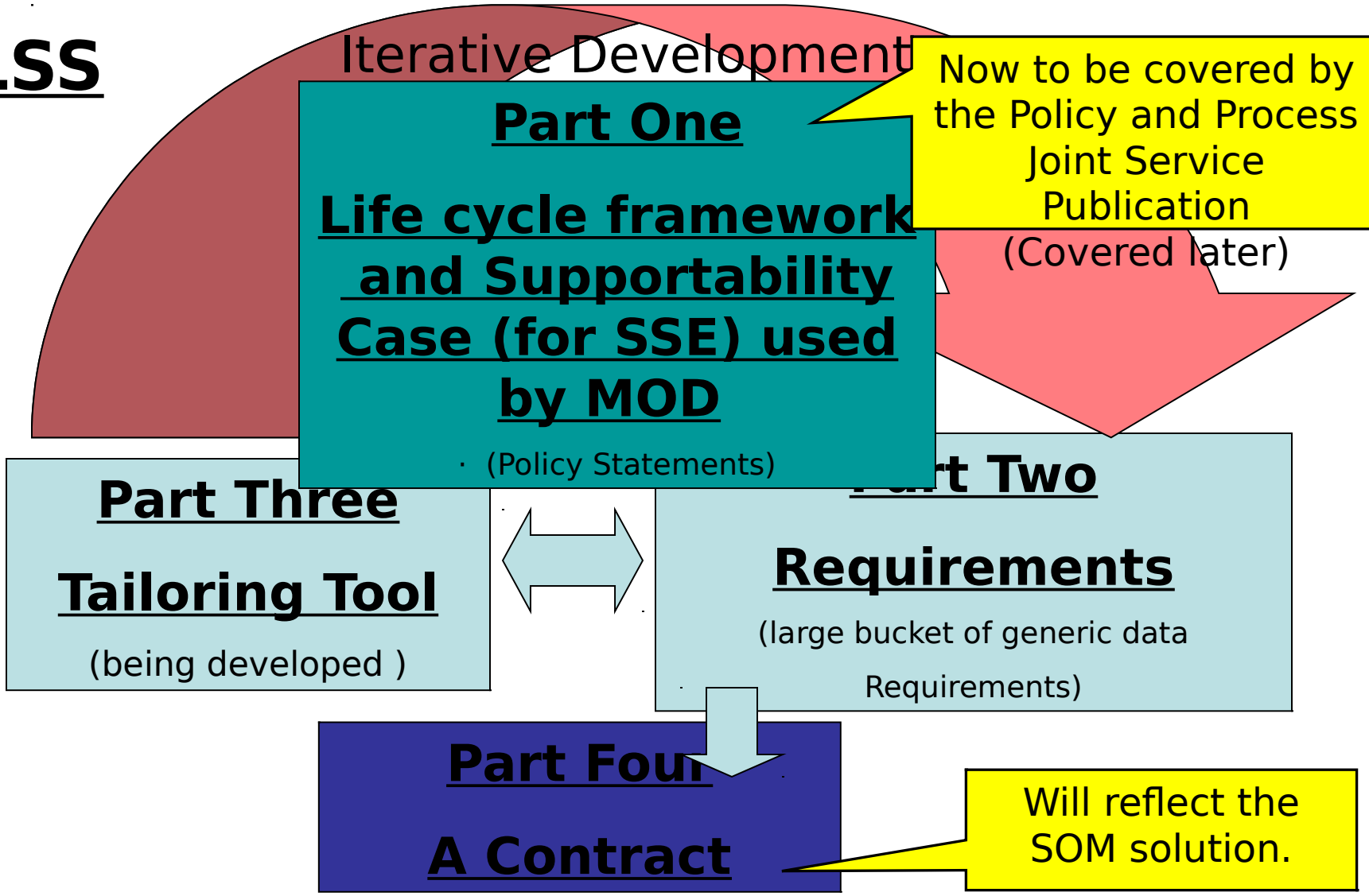
- It gives us the possibility of:
  - an internationally agreed activity and data model.
  - a set of internationally agreed data exchange packages.
  - Agreed definitions
  - Standards reference data.
- At the moment it is too immature to achieve these aims and it does not cover the full scope of Support.
- How is the UK tackling the problem?
- We are heavily involved in PLCS development, both from an MOD and industry standpoint.
- We also have our own plans

UK Approach

- We have completed some piecemeal activity.
- We have now embarked on a more holistic approach by:
  - Creating a understandable activity model from the PLCS generic activity model.
  - Comparing that model with a number of existing logistics standards and applications to produce a rationalised set of data requirements.
  - Embarked on producing:
    - Through Life Support Standard (TLSS)
    - Joint Service Publication for Policy and Process
    - Set of Key Support Areas within the Support Solutions Envelope
    - Support Maturity Appraisal framework.

Through Life Support Standard (TLSS

TLSS


Iterative Development
Part One
Life cycle framework and Supportability Case (for SSE) used by MOD
(Policy Statements)
Now to be covered by the Policy and Process Joint Service Publication
(Covered later)
Part Three
Tailoring Tool
(being developed)
Part Two
Requirements
(large bucket of generic data Requirements)
Part Four
A Contract
Will reflect the SOM solution.

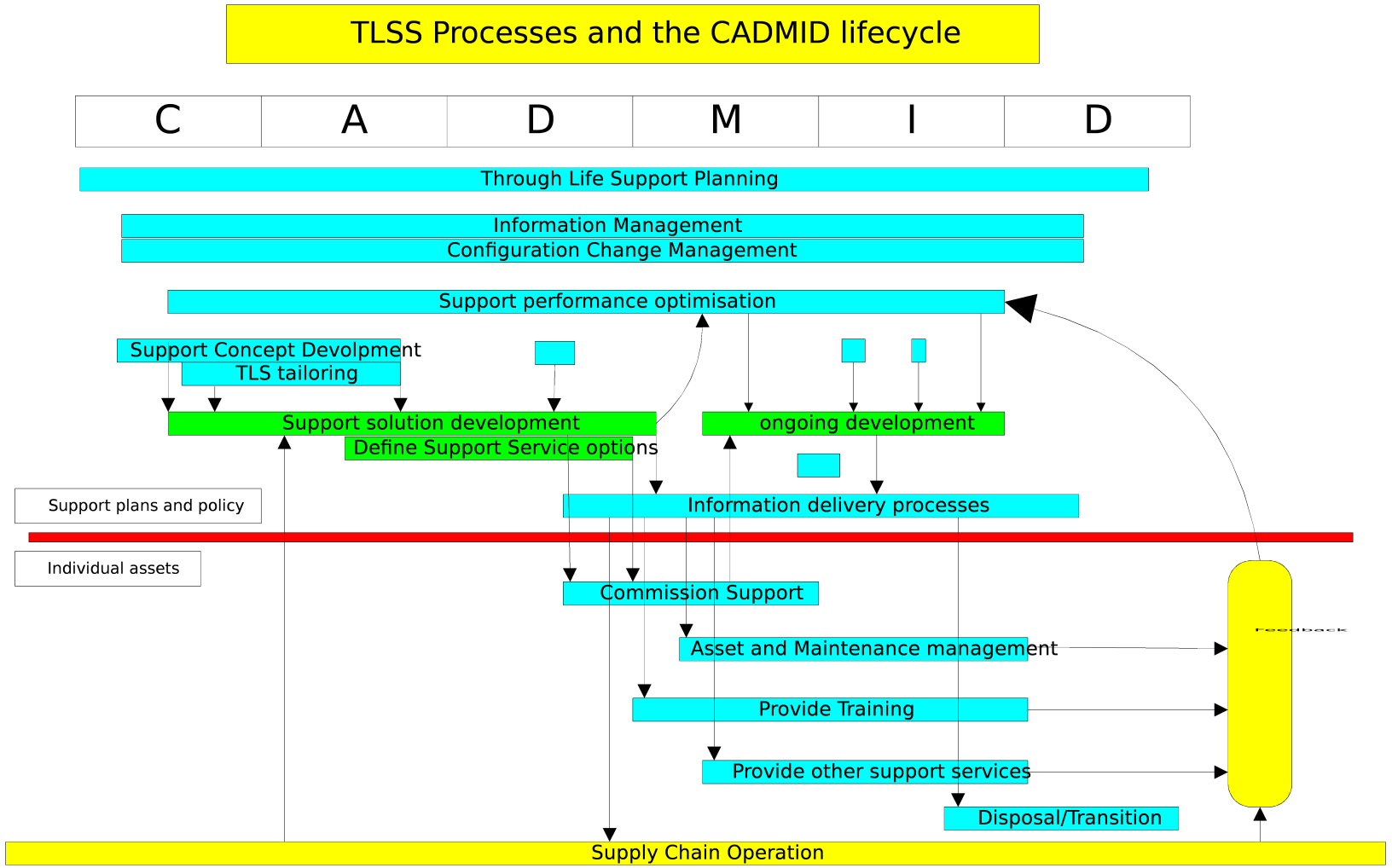
Data Requirements & Data Exchange

- Approx. 2500 Data Requirements (Tailorable)
- Sourced and harmonized from:
  - MOD Through-life Requirements for ILS (TRILS) Logical Data Model:
    - ISO 10303, DEF STAN 00-60, DEF STAN 02-45, DEF STAN 05-57, AECMA S1000D, AECMA S2000M, EIA 649, EIA 836
    - EDCAS, SSD, SSDD, RCMS, RCS, CRISP, PROFILE, UMMS, DRACAS, OASIS, MIMS, PEPS
    - See next slides for life cycle applicability
  - Lean Logistic Model Proof of Concept (LLMPoC):
    - ISIS, GEMS, RAMS, EDP, CRISP, SCCS, USAS II, OASIS, QSTAR

Data Requirements & Data Exchange

- Additional Gap Analyses:
  - OAGIS, JAMES, UMMS, DEF STAN 00-60 (recent updates), DEF STAN 81-131, DEF STAN 05-57, DEF STAN 00-25, DEF STAN 00-40, BS7000-5, AECMA S1000D, DEF STAN 05-10, MIL STD 1390D, AECMA S2000M (recent updates), DEF STAN 00-44, DEF STAN 00-56, DEF STAN 00-42
- Development of TLSS Data Exchange Sets (DEXs) and TLSS Reference Data

Activity/Process Model Devt



Note: Both the product and its support solutions will change through life by iterating the CADMID cycle for each modification, obsolescence or support improvement

Joint Service Publication Supportability Engineering

Supportability Engineering/ILS Management - JSP

- Supportability Engineering takes a more holistic approach then ILS Management to ensure all elements of Through-life Support enable the efficient and effective acquisition of platforms, systems and equipment.
- It is a direct outcome of the re-write of DEF STAN 00.60 and/or the TLSS Project

JSP Policy Subject Headings

- Systems Engineering
- Configuration Management
- Risk Management
- Quality Management
- Supportability Assurance
- Safety & Environment Management
- Supportability Engineering/ILS
- Management Technology Management

Supportability Engineering Elements

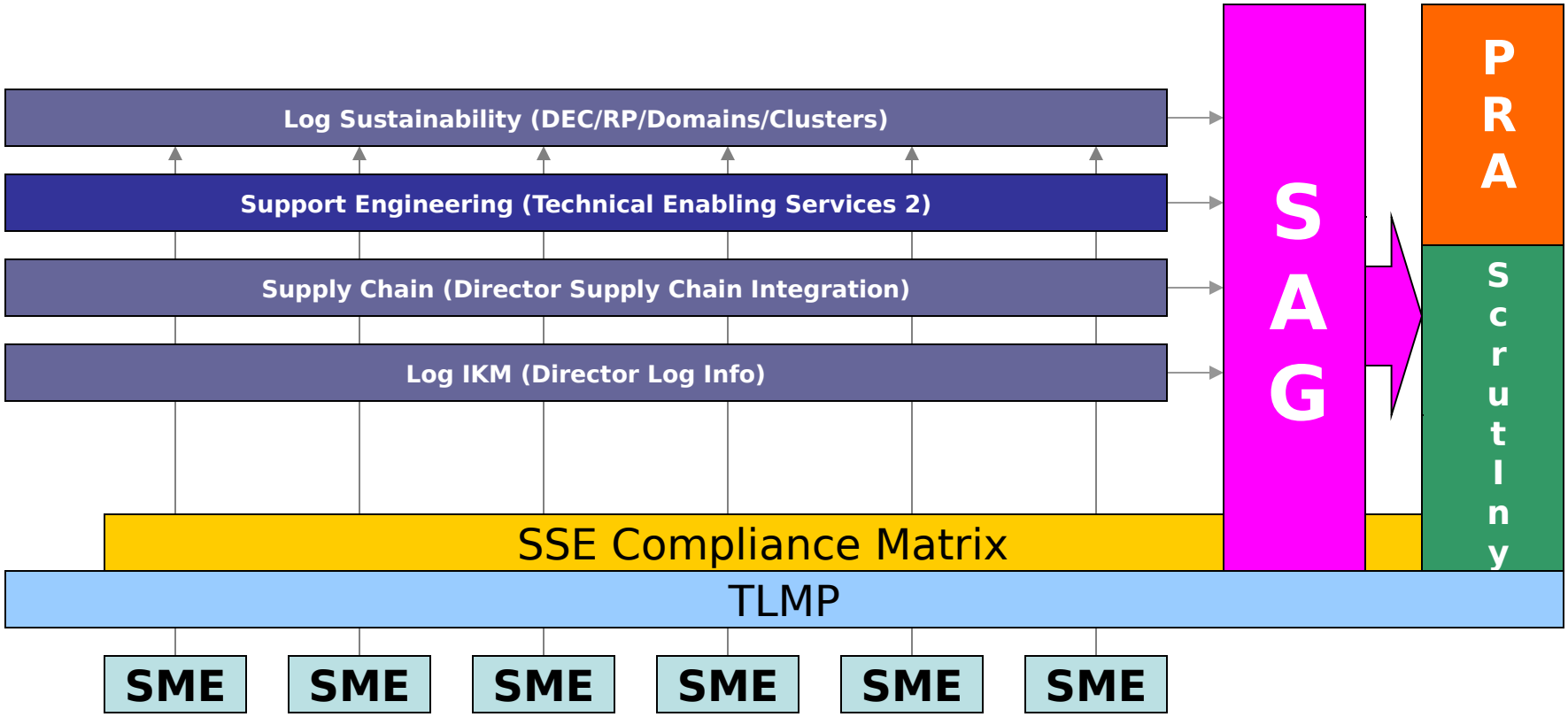
- Supportability Engineering Planning
- LCC & Budgeting
- Maintenance Engineering
- System Design & Sustainability
- Reliability, Maintainability & Testability
- Supply Support
- Support & Test Equipment
- Facilities and Infrastructure
- Manpower & Human Factors
- Training
- Technical Information & Data
- Packaging, Handling & Transportation
- Software Support
- In-service support
- Asset Management
- Logistics Performance Monitoring
- Obsolescence
- Disposal

Support Solutions Envelope

- We are revising the Support Solutions Envelope (SSE) into 4 Key Support Areas (KSA). These are:
  - Supportability Engineering (ILS)
  - Supply Chain
  - Information and Knowledge Management
  - Sustainability
- The SSE will align with the JSP and TLSS.
- It will be the tool used during assurance to judge progress.

Support Solutions Envelope
Key Support Areas

Key Support Areas



Support Maturity Appraisal

Support Maturity Appraisal

- Last but not least how to assure that the project is on target to deliver a robust support solution
  - The concept of a Support Maturity Appraisal has been developed and a structure is now available.
  - This will have a number of roles. It will:
    - Act as a repository for the evidence used in the Assurance process.
    - Act as a record of crucial support decisions explaining the analysis prior to a decision and the decision itself.
    - Be a through life document to enable the development of the support solution to be recorded.
  - It will sit alongside the Support case being developed by industry which may act as a contract performance record.

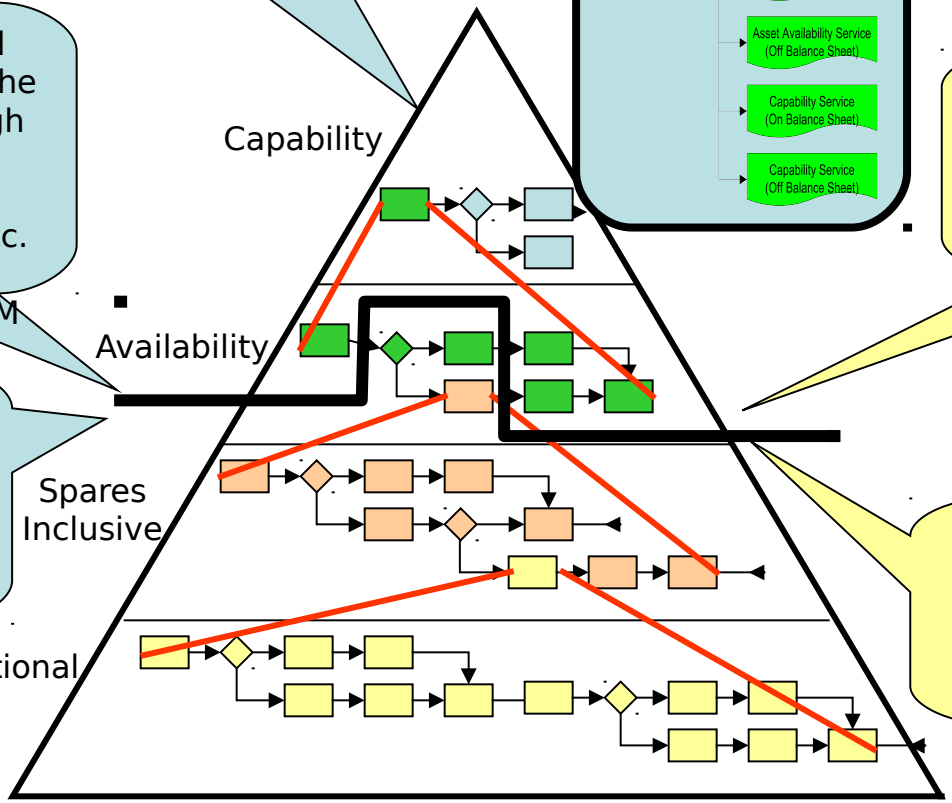
Plan

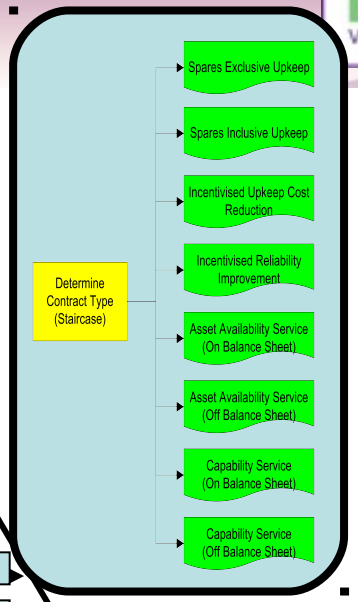
Description	2005	2006	2007	2008
TLSS User Requirement Document				
Rationalised data Requirements				
High Level Process Model				
Activity and Processes models based on PLCS				
Support Maturity Appraisal	Framework	Trial		

TLSS will scope and articulate the overall support functions in terms of an Activity Model and a Process Model (AM/PM)

The tailoring tool will assist in determining the optimum route through the AM/PM based on Capability, Risk, Performance, Costs etc. and the acquisition strategy from the SOM

The Support Maturity Appraisal process will dynamically change the validation requirements based on the tailoring tool output.



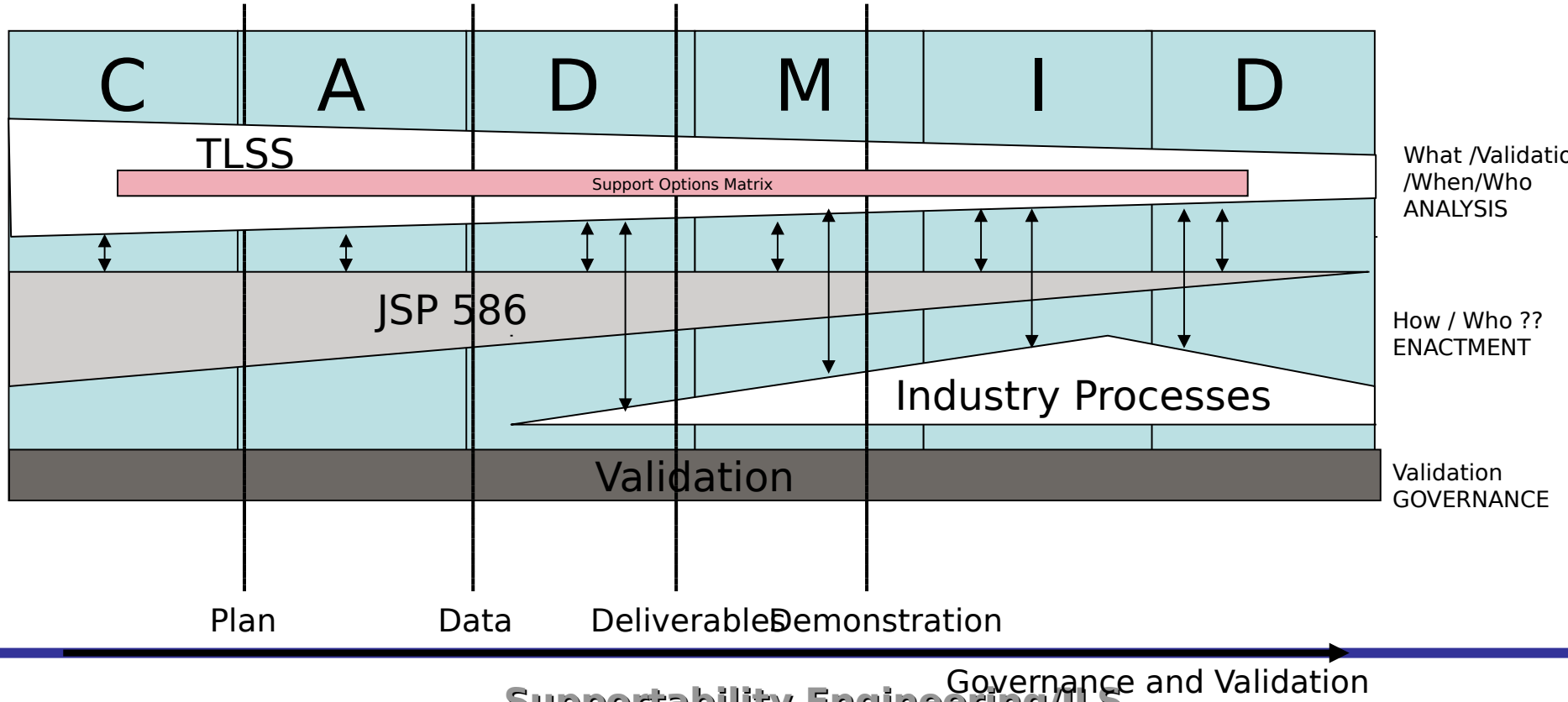


Support Options Matrix

JSP 586 will articulate and mandate the process for all activities to undertaken in the MOD.

For activities undertaken in industry, the MOD will NOT mandate process merely the data interchange requirements.

Summary


C
A
D
M
I
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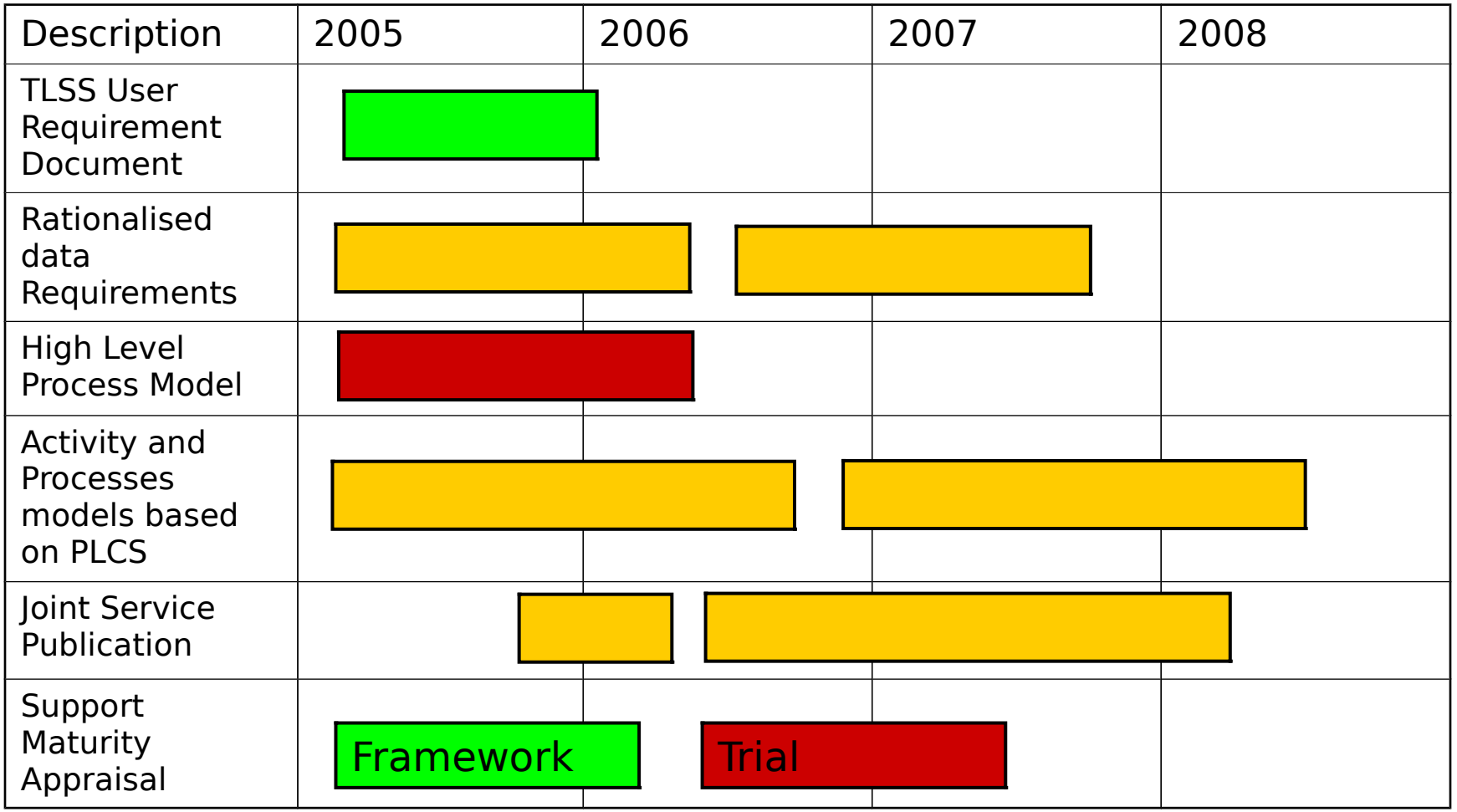
TLSS
Support Options Matrix
JSP 586
Industry Processes
Validation
What /Validatio
/When/Who
ANALYSIS
How / Who ??
ENACTMENT
Validation
GOVERNANCE
Plan
Data
Deliverables
Demonstration
Governance and Validation

Plan


Description
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Rationalised data Requirements
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Activity and Processes models based on PLCS
Joint Service Publication
Support Maturity Appraisal
Framework
Trial

Summary

- We are reacting to the changing situation and the need to revise our contracting standard – Defence Standard 00-60. Any solution will be across all services, but with flexibility.
- The base for the change will be International standards such as PLCS and those from ASD and will include:
  - Policy and Process framework
  - A contracting standard that can be tailored to individual projects
  - Revised input to the Support Solutions Envelope
  - A Support Maturity Appraisal

Summary

- There are some buts;
  - PLCS does not cover the whole of support and hence needs to be developed further.
  - Much work needs to be completed on:
    - data requirements and definitions.
    - Reference Data
  - We should not approach this piecemeal we should adopt an holistic approach.

Summary

- However there is the basis of a solution with the PLCS capabilities that increase the granularity of the data exchanges significantly. The current DEX concept does the opposite and decreases flexibility.
- I believe the UK will use the capabilities as the building blocks for tailored project specific data exchanges based on agreed data definitions and Reference Data.